

Ch. 7 Review

Convert from radians \longleftrightarrow degrees (No calculator)

1. $\frac{3\pi}{2}$

2. $\frac{4\pi}{9}$

3. 100°

4. 36°

Find the period, amplitude, equation for the line of oscillation (the midline), consider any reflections or shifts and sketch the graph:

5. $y = 4 + 2 \cos x$

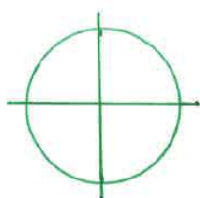
6. $y = -3 \sin(x - \frac{\pi}{2})$

7. $y = \sin 2x + 1$

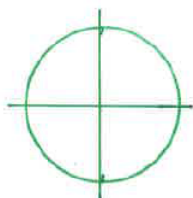
8. $y = 3 + \sin(x + \frac{\pi}{4})$

Draw the following angles on the unit circle:

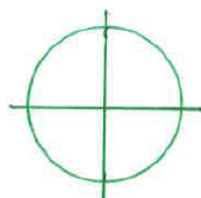
9. $\frac{4\pi}{3}$



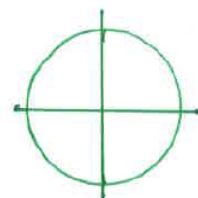
10. $\frac{10\pi}{6}$



11. $-\frac{5\pi}{6}$



12. $\frac{3\pi}{4}$



Use your unit circle to find:

13. $\sin \frac{7\pi}{4}$

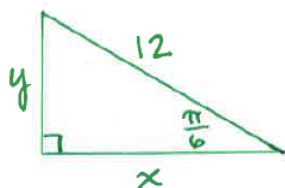
14. $\cos \frac{4\pi}{3}$

15. $\tan \frac{\pi}{2}$

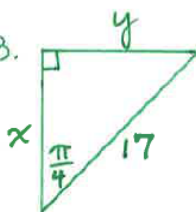
16. $\sin\left(-\frac{\pi}{6}\right)$

Find x & y exact:

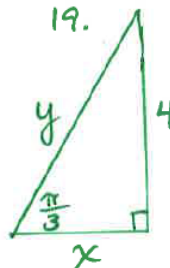
17.



18.



19.



20.

If $\cos \theta = -\frac{\sqrt{3}}{2}$

Find θ

Describe the transformations of the parent graph to get:

21. $y = -2 + 4\cos(2x - \pi)$

22. $y = -\frac{1}{3}\sin x + 8$

23. $y = \tan\left(x - \frac{\pi}{6}\right) - 4$

24. $y = \frac{2}{3}\cos(4x + \pi)$

Solve. Answer exact & simplified.

25. $3^{x+5} \cdot 9 = 3^{4x}$

26. $4\log_3 2 = \log_3 x + \log_3 2x$